

Jean-Noël Roux

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

3,737
citations

159585

30
h-index

149698

56
g-index

65
all docs

65
docs citations

65
times ranked

2131
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1 | Rheophysics of dense granular materials: Discrete simulation of plane shear flows. <i>Physical Review E</i> , 2005, 72, 021309. | 2.1 | 867 |
| 2 | Frictionless bead packs have macroscopic friction, but no dilatancy. <i>Physical Review E</i> , 2008, 78, 011307. | 2.1 | 164 |
| 3 | Dynamical diagnostics for the glass transition in soft-sphere alloys. <i>Journal of Physics Condensed Matter</i> , 1989, 1, 7171-7186. | 1.8 | 159 |
| 4 | Geometric origin of mechanical properties of granular materials. <i>Physical Review E</i> , 2000, 61, 6802-6836. | 2.1 | 159 |
| 5 | Viscosimetric and Neutron Scattering Study of Asphaltene Aggregates in Mixed Toluene/Heptane Solvents. <i>Langmuir</i> , 1998, 14, 1013-1020. | 3.5 | 154 |
| 6 | Internal states of model isotropic granular packings. I. Assembling process, geometry, and contact networks. <i>Physical Review E</i> , 2007, 76, 061302. | 2.1 | 150 |
| 7 | Diffusion, viscosity and structural slowing down in soft sphere alloys near the kinetic glass transition. <i>Chemical Physics</i> , 1990, 149, 197-208. | 1.9 | 146 |
| 8 | Brownian dynamics and kinetic glass transition in colloidal suspensions. <i>Physical Review A</i> , 1991, 44, 1169-1181. | 2.5 | 139 |
| 9 | Dense flows of cohesive granular materials. <i>Journal of Fluid Mechanics</i> , 2008, 596, 21-47. | 3.4 | 135 |
| 10 | Elastic wave propagation in confined granular systems. <i>Physical Review E</i> , 2005, 72, 021301. | 2.1 | 128 |
| 11 | Internal states of model isotropic granular packings. III. Elastic properties. <i>Physical Review E</i> , 2007, 76, 061304. | 2.1 | 126 |
| 12 | Annular shear of cohesionless granular materials: From the inertial to quasistatic regime. <i>Physical Review E</i> , 2009, 79, 021306. | 2.1 | 125 |
| 13 | SANS Study of Asphaltene Aggregation: Concentration and Solvent Quality Effects. <i>Langmuir</i> , 2001, 17, 5085-5092. | 3.5 | 122 |
| 14 | Quasistatic rheology and the origins of strain. <i>Comptes Rendus Physique</i> , 2002, 3, 131-140. | 0.9 | 101 |
| 15 | Dense flows of bidisperse assemblies of disks down an inclined plane. <i>Physics of Fluids</i> , 2007, 19, 058101. | 4.0 | 87 |
| 16 | Strain versus Stress in a Model Granular Material: A Devil's Staircase. <i>Physical Review Letters</i> , 2000, 85, 3628-3631. | 7.8 | 78 |
| 17 | What do dry granular flows tell us about dense non-Brownian suspension rheology?. <i>Rheologica Acta</i> , 2009, 48, 925-942. | 2.4 | 72 |
| 18 | Rheophysics of cohesive granular materials. <i>Europhysics Letters</i> , 2006, 74, 644-650. | 2.0 | 69 |

| # | ARTICLE | IF | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Modeling Granular Materials: Century-Long Research across Scales. Journal of Engineering Mechanics - ASCE, 2017, 143, . | 2.9 | 67 |
| 20 | Internal states of model isotropic granular packings. II. Compression and pressure cycles. Physical Review E, 2007, 76, 061303. | 2.1 | 48 |
| 21 | Flow of wet granular materials: A numerical study. Physical Review E, 2015, 92, 022201. | 2.1 | 48 |
| 22 | Solidlike behavior and anisotropy in rigid frictionless bead assemblies. Physical Review E, 2008, 78, 041307. | 2.1 | 38 |
| 23 | Brownian particles at different times scales: a new derivation of the Smoluchowski equation. Physica A: Statistical Mechanics and Its Applications, 1992, 188, 526-552. | 2.6 | 37 |
| 24 | Discrete simulation of dense flows of polyhedral grains down a rough inclined plane. Physical Review E, 2012, 86, 031303. | 2.1 | 37 |
| 25 | Delayed Fracture in Porous Media. Physical Review Letters, 2005, 95, 175501. | 7.8 | 34 |
| 26 | Shear flow of dense granular materials near smooth walls. I. Shear localization and constitutive laws in the boundary region. Physical Review E, 2012, 86, 011301. | 2.1 | 34 |
| 27 | 3D particle shape modelling and optimization through proper orthogonal decomposition. Granular Matter, 2017, 19, 1. | 2.2 | 34 |
| 28 | Basic Mechanical Properties of Wet Granular Materials: A DEM Study. Journal of Engineering Mechanics - ASCE, 2017, 143, . | 2.9 | 32 |
| 29 | Friction law in dense granular flows. Powder Technology, 2009, 190, 264-268. | 4.2 | 31 |
| 30 | Interface roughness effect on slow cyclic annular shear of granular materials. Granular Matter, 2011, 13, 525-540. | 2.2 | 31 |
| 31 | Internal friction and absence of dilatancy of packings of frictionless polygons. Physical Review E, 2015, 91, 010202. | 2.1 | 30 |
| 32 | Numerical study of one-dimensional compression of granular materials. I. Stress-strain behavior, microstructure, and irreversibility. Physical Review E, 2017, 95, 032907. | 2.1 | 25 |
| 33 | Numerical study of one-dimensional compression of granular materials. II. Elastic moduli, stresses, and microstructure. Physical Review E, 2017, 95, 032908. | 2.1 | 23 |
| 34 | Resistance jumps in mercury injection in porous media. Physical Review A, 1988, 37, 3921-3926. | 2.5 | 22 |
| 35 | Shear strength of wet granular materials: Macroscopic cohesion and effective stress. European Physical Journal E, 2018, 41, 68. | 1.6 | 20 |
| 36 | Railway Ballast: Grain Shape Characterization to Study its Influence on the Mechanical Behaviour. Procedia Engineering, 2016, 143, 1120-1127. | 1.2 | 18 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Discrete Digital Projections Correlation: A Reconstruction-Free Method to Quantify Local Kinematics in Granular Media by X-ray Tomography. <i>Experimental Mechanics</i> , 2017, 57, 819-830. | 2.0 | 18 |
| 38 | Inertial shear flow of assemblies of frictionless polygons: Rheology and microstructure. <i>European Physical Journal E</i> , 2018, 41, 2. | 1.6 | 16 |
| 39 | Investigating the hydromechanical behaviour of bentonite pellets by swelling pressure tests and discrete element modelling. <i>Acta Geotechnica</i> , 2021, 16, 507-524. | 5.7 | 16 |
| 40 | MRI investigation of granular interface rheology using a new cylinder shear apparatus. <i>Magnetic Resonance Imaging</i> , 2010, 28, 910-918. | 1.8 | 15 |
| 41 | Modelling the behaviour of bentonite pellet-powder mixtures upon hydration from dry granular state to saturated homogeneous state. <i>Engineering Geology</i> , 2020, 278, 105847. | 6.3 | 15 |
| 42 | Molecular dynamics simulations of supercooled liquids near the glass transition. <i>Journal of Non-Crystalline Solids</i> , 1991, 131-133, 255-261. | 3.1 | 13 |
| 43 | Elasticity of model weakly cemented granular materials: A numerical study. <i>International Journal of Solids and Structures</i> , 2020, 193-194, 13-27. | 2.7 | 12 |
| 44 | Discrete numerical simulation, quasistatic deformation and the origins of strain in granular materials. , 2003, , . | | 8 |
| 45 | Effects of the initial granular structure of clay sealing materials on their swelling properties: experiments and DEM simulations. <i>EPJ Nuclear Sciences & Technologies</i> , 2020, 6, 1. | 0.7 | 6 |
| 46 | Experimental investigation on the grain-scale compression behavior of loose wet granular material. <i>Acta Geotechnica</i> , 2020, 15, 1039-1055. | 5.7 | 5 |
| 47 | Macro-microscopic one-dimensional compression of wet granular soils by experimental investigation. <i>E3S Web of Conferences</i> , 2016, 9, 06001. | 0.5 | 3 |
| 48 | Rheology of wet granular materials in shear flow: experiments and discrete simulations. <i>E3S Web of Conferences</i> , 2016, 9, 14008. | 0.5 | 3 |
| 49 | Assessing contact forces in granular materials from experimental measurements of kinematics. <i>EPJ Web of Conferences</i> , 2017, 140, 02012. | 0.3 | 3 |
| 50 | Quasistatic behaviour of granular materials: Some things we learned from DEM studies. , 2013, , . | | 2 |
| 51 | Rheology of wet granular materials under continuous shear: experiments and simulations. <i>EPJ Web of Conferences</i> , 2017, 140, 08019. | 0.3 | 2 |
| 52 | Dry granular flows – rheological measurements of the μ_4 (μ) – Rheology. <i>EPJ Web of Conferences</i> , 2017, 140, 03005. | 0.3 | 2 |
| 53 | Quasistatic response of loose cohesive granular materials. <i>EPJ Web of Conferences</i> , 2021, 249, 14021. | 0.3 | 2 |
| 54 | Influence of heterogeneities of density on the hydromechanical behaviour of pellet-based bentonite materials in imbibition experiments. <i>Applied Clay Science</i> , 2022, 216, 106353. | 5.2 | 2 |

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Investigation into the isotropic compression of wet granular soils using discrete element method. E3S Web of Conferences, 2016, 9, 08008. | 0.5 | 1 |
| 56 | Reply to "Comment on "Flow of wet granular materials: A numerical study" Physical Review E, 2017, 96, 016902. | 2.1 | 1 |
| 57 | Influence of 3D particle shape on the mechanical behaviour through a novel characterization method. EPJ Web of Conferences, 2017, 140, 06027. | 0.3 | 1 |
| 58 | Flow of dry and wet granular materials: Numerical simulation results. , 2013, , . | | 0 |
| 59 | Investigation into macroscopic and microscopic behaviors of wet granular soils using discrete element method and X-ray computed tomography. EPJ Web of Conferences, 2017, 140, 08018. | 0.3 | 0 |
| 60 | A DEM study of oedometric compression of model granular materials Initial state influence, stress ratio, elasticity, irreversibility.. EPJ Web of Conferences, 2017, 140, 02028. | 0.3 | 0 |
| 61 | Granular Materials: Micromechanical Approaches of Model Systems. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2019, , 141-193. | 0.6 | 0 |
| 62 | Force distribution in two dimensional sandpile. Nonlinear Phenomena and Complex Systems, 2004, , 297-303. | 0.0 | 0 |
| 63 | Modelling the hydromechanical behaviour of expansive granular mixtures upon hydration. E3S Web of Conferences, 2020, 195, 02006. | 0.5 | 0 |
| 64 | Elasticity and Mechanical Behaviour of Granular Materials: Some Insights from Numerical Studies of Simple Systems. Advances in Mechanics and Mathematics, 2020, , 185-224. | 0.7 | 0 |